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DATE: June 12, 2002



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant:	Galen R. Hatfield	Group Art Unit:	2881
Serial No.:	09/268,892	Examiner:	K. Nguyen
Filing Date:	March 16, 1999	Docket No.:	D-43025-01
Title:	AUTHENTICATION SYSTEM AND METHODOLOGY		

Assistant Commissioner for Patents
Washington, D.C. 20231

BRIEF ON APPEAL

This Brief is filed in triplicate in support of a Notice of Appeal mailed February 11, 2002 and received by the Patent Office on February 26, 2002, the period for filing having been extended to June 26, 2002 by the attached Petition for Extension of Time. Appellant appealed from the Office Action mailed October 11, 2001, which finally rejected all pending claims of the above-referenced patent application.

Please charge the \$320.00 fee believed due under 35 C.F.R. § 1.17(c) for filing this Brief, as well as any additional fees or crediting any overpayments, to Account No. 07-1765.

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Real Party in Interest

The real party in interest is Cryovac, Inc., assignee of the above-referenced patent application.

Related Appeals and Interferences

There are no other appeals or interferences known to Appellant, the Appellant's legal representative, or assignee which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal -- other than possibly the currently pending appeal of U.S. Patent Application Serial No. 09/268,916 filed March 16, 1999 by Hatfield entitled "Dosimetric Package and Methods of Making and Characterizing Same" owned by the same entity as the present application and containing some similar subject matter as the present application.

Status of Claims

Claims 1-10, 13-15, 17-37 are pending. Claims 11-12 and 16 were canceled. Claims 1-10, 13-15, 17-37 are appealed. A copy of these claims appears in the Appendix.

Status of Amendments

Appellant filed a Response After Final on February 11, 2002 amending claim 37. In the Advisory Action mailed March 8, 2002, the Examiner stated that this amendment would be entered upon submission of the Appeal Brief. Accordingly, the copy of the appealed claims in the Appendix shows the claims in the amended form.

Summary of the Invention

One aspect of the present invention is directed to a method of authenticating a package. First, a package is provided that incorporates a given amount of one or more authenticating agents (e.g., alanine). (Page 3, lines 27-29; page 11, lines 19-27; page 4, lines 14-15.) Upon exposure to a given effective dosage of radiation, these authenticating agents are capable of forming detectable free radicals having a characteristic spectral response. (Page 3, lines 10-18; page 4, lines 15-21.) Second, at least a portion of a package to be authenticated is

exposed to the given effective dosage of radiation. (Page 4, lines 25-28.) Third, the irradiated package portion is spectroscopically analyzed to obtain a spectral response for the irradiated package portion. (Page 4, lines 5-12.) The spectral response for the irradiated package portion is compared to the characteristic spectral response to determine whether the package to be authenticated is authentic. (Page 24, lines 10-15.)

In another aspect of the present invention, a package 10 comprises a product 12 and an effective amount of authenticating agent incorporated into the package. (Page 22, lines 20-22; Fig. 2.) The authenticating agent is a substance (e.g., alanine) that forms detectable free radicals upon irradiation. (Page 3, lines 10-11.) The package 10 may comprise one or more packaging materials such as a polymeric packaging film 14. (Page 12, lines 23-26.) The authenticating agent may be incorporated in the polymeric packaging film 14. (Page 3, lines 23-25; Fig. 2.)

Issues

The issues presented for review are:

- 1) Whether pending claims 1-2, 4-8, 10, 13-15, 17-23, 26, and 36 are anticipated under 35 U.S.C. § 102(b) by Regulla et al, "Dosimetry by ESR Spectroscopy of Alanine," Int. J. Appl. Radiat. Isot., Vol. 33, pp. 1101-1114 (1982);
- 2) Whether pending claims 1-5, 7-10, 13-15, 17-23, 27, 29-30, 32, and 35-37 are anticipated under 35 U.S.C. § 102(b) by U.S. Patent 4,668,714 to Morita; and
- 3) Whether pending claims 6, 24-26, 28, 31, and 33-34 are obvious under 35 U.S.C. § 103(a) in view of Morita.

Grouping of Claims

The Examiner has grouped claims 1-2, 4-8, 10, 13-15, 17-23, 26, and 36 together for an anticipation rejection. These claims do not stand or fall together. Appellant explains below why claims 13-15, 17-23, 26, and 36 are believed to be separately patentable. Solely for the purpose of this appeal on the basis of the lack of anticipation by the applied reference, the remainder of the claims of this group are deemed to stand or fall together.

The Examiner has grouped claims 1-5, 7-10, 13-15, 17-23, 27, 29-30, 32, and 35-37 together for an anticipation rejection. These claims do not stand or fall together. Appellant explains below why claims 13-15, 17-23, 27, 29-30, 32, and 35-37 are believed to be separately patentable. Solely for the purpose of this appeal on the basis of lack of anticipation by the applied reference, the remainder of the claims of this group are deemed to stand or fall together.

The Examiner has grouped claims 6, 24-26, 28, 31, and 33-34 together for an obviousness rejection. These claims do not stand or fall together. Appellant explains below why claims 24-26, 28, 31, and 33-34 are believed to be separately patentable from claim 6.

Argument

I. The claims are patentable over Regulla.

Claims 1-2, 4-8, 10, 13-15, 17-23, 26, and 36 were rejected under 35 U.S.C. § 102(b) as anticipated by Regulla et al, "Dosimetry by ESR Spectroscopy of Alanine," Int. J. Appl. Radiat. Isot., Vol. 33, pp. 1101-1114 (1982) ("Regulla"). Appellant respectfully traverses this rejection.

A. Regulla teaches a dosimeter rather than a package and therefore does not anticipate the claims.

Regulla discloses a dosimeter based on the electron spin analysis of radiation-induced free radicals in alanine. (Regulla, page 1114 Summary.) The Regulla dosimeter consists of pellets made of up to 90 weight % alanine bound in paraffin. (Regulla, page 1104 Sample Preparation.) Regulla fails to teach or suggest anything regarding a "package" as recited in independent claims 1, 7, 21, and 22 -- and accordingly fails to anticipate these claims and their dependent claims.

B. The Examiner's unsupported definition of "package" is contrary to its ordinary meaning.

In the present case, the specification neither defines the term "package" nor uses it contrary to its commonly understood meaning to those of skill in the art. Therefore, the

Examiner must apply a plain, ordinary meaning to the claim term "package." *In re Sneed*, 710 F.2d 1544, 218 USPQ 385 (Fed. Cir. 1983).

Contrary to an ordinary meaning, however, the Examiner defined "package" as a "unit for containing elements." (Office Action mailed Oct. 11, 2001 at page 4, line 11-12.) The Examiner has never supplied any support for the asserted definition -- even after Appellant respectfully traversed the asserted definition and respectfully requested that the Examiner supply references to support the asserted definition (pursuant to MPEP 2144.03), based on an assumption that the Examiner relied upon common knowledge or well-known prior art to establish the definition. (Response mailed February 11, 2002 at page 3, lines 2-5.)

Further, the Examiner has applied this asserted definition of "package" so broadly as to render the word "package" meaningless. This is because the Examiner stretched the asserted meaning of "package" to cover *anything* comprising at least two components. Such a broad meaning is contrary to an ordinary meaning of "package" to those of ordinary skill in the art.

For example, the Examiner's position appears to be that the Regulla dosimeter (consisting of alanine bound by paraffin) is a "package" simply because the alanine is bound by paraffin. The Office Action cites Figure 15 of Regulla as establishing that Regulla teaches "amino acids or alanine which are packed in the form of the sample units." (Office Action mailed Oct. 11, 2001 at page 4, lines 7-8.) However, Appellant's attorney has not been able to locate a Figure 15 in the Regulla reference.

Further, assuming that the Examiner is referring to dosimeter pellets made of up to 90 weight % alanine bound in paraffin (Regulla, page 1104 Sample Preparation), such dosimeter samples can hardly be equated to a "package." Although a candle consists of a wick and perfume bound by candle wax, no one refers to either the candle wax or the candle itself as a "package" of the wick and perfume. And while waxed paper consists of paper coated with wax, no one legitimately says that the wax is a "package" for the paper. Therefore, just as candles and waxed paper are not "packages," so too is the Regulla dosimeter of alanine bound by paraffin not a "package." Since the Regulla dosimeter is not a "package," Regulla does not anticipate the claims.

C. Claims 13-15, 17-23, 26, and 36 are separately patentable.

Regulla also fails to teach or suggest anything related to “comparing the spectral response . . . to determine whether the package to be authenticated is authentic” as recited in independent method claims 21 and 22, and their dependent claims 13-15, 17-20, 23, 26, and 36 depend from either claim 21 or claim 22. Regulla is directed to a dosimeter, and teaches nothing regarding authentication of a package. Accordingly, independent method claims 21 and 22, along with the dependent claims, is patentable over Regulla.

D. The Examiner failed to provide any rationale for the rejection of claims 21-23, 26, and 36 in view of Regulla.

The Examiner failed to provide *any* reasoning supporting a rejection of claims 21-23, 26, and 36 on the basis of Regulla. It is true that the Office Action (mailed Oct. 11, 2001 at page 2, lines 16-17) refers the Appellant to “the previous office action” for the reasoning of the rejection; however, claims 21-37 were not pending during the previous Office Action and were therefore, of course, not discussed in the previous Office Action. Accordingly, since none of the Office Actions in this case provides any rationale for rejecting these claims over Regulla, the rejection should be withdrawn.

II. The claims are patentable over Morita

Claims 1-5, 7-10, 13-15, 17-23, 27, 29-30, 32, and 35-37 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 4,668,714 to Morita. Appellant respectfully traverses this rejection.

A. Morita teaches a dosimeter rather than a package and therefore does not anticipate the claims.

Morita discloses the use of alanine in a molded dosimeter. (Column 2, lines 66-68.) Ten to 500 parts by weight of alanine is mixed with 100 parts by weight rubber to produce a molded rubber dosimeter. (Column 3, lines 29-31, 56-59.)

Morita fails to disclose or even suggest an “authenticating agent incorporated into the package,” as recited by independent claim 1, or “incorporating an authenticating agent into a

component of the package," as recited by independent claim 7, or "providing a package" as recited in independent claims 21 and 22. This is because Morita fails to disclose a *package*. To the direct contrary, Morita teaches a mixture of rubber and alanine as a molded *dosimeter*. Accordingly, Morita fails to anticipate these independent claims and their dependent claims.

B. The Examiner inappropriately applied an extraordinary meaning of "package."

The shortcomings of the Examiner's unsupported definition of "package" are discussed above in the previous section, and therefore are not repeated in detail here -- other than to state again that the Examiner has applied an unsupported, extraordinary definition of "package" contrary to a plain, ordinary meaning of "package."

The Examiner states that Morita teaches a molded rubber sheet. (Office Action mailed Oct. 11, 2001 at page 4, lines 9-10.) However, a molded rubber sheet containing alanine is not a "package" as that term is commonly used, just as: 1) a steel-belted tire is not a "package" of the tire rubber and belted steel or 2) a black wet suit is not a "package" of sponge rubber and the black pigment within the sponge rubber of the wet suit. Just as a tire or a wet suit is not referred to as a "package," so too is the Morita dosimeter not considered a "package" as that term is commonly understood. And since Morita fails to disclose a "package," Morita does not anticipate the claims.

C. Claims 13-15, 17-23, 27, 29-30, 32, and 35-37 are separately patentable.

Morita also fails to teach or suggest anything related to "comparing the spectral response . . . to determine whether the package to be authenticated is authentic" as recited in independent method claims 21 and 22 and their dependent claims 13-15, 17-20, 23, 27, 29-30, 32, and 35-37. Morita is directed to a dosimeter, and teaches nothing regarding authentication of a package. Accordingly, independent method claims 21 and 22, along with the dependent claims, are patentable over Morita.

D. The Examiner failed to provide any rationale for the rejection of claims 21-23, 27, 29-30, 32, and 35-37 on the basis of Morita.

The Examiner failed to provide *any* reasoning supporting a rejection of claims 21-23, 27, 29-30, 32, and 35-37 on the basis of Morita. It is true that the Office Action (mailed Oct. 11, 2001 at page 2, lines 16-17) refers the Applicant to “the previous office action” for the reasoning of the rejection of these claims; however, claims 21-37 were not pending during the previous Office Action and were therefore, of course, not discussed in the previous Office Action. Accordingly, since none of the Office Actions in this case provides any rationale for rejecting these claims over Morita, the rejection should be withdrawn.

III. The claims are patentable over Morita combined with the asserted “well-known” information.

The Examiner grouped dependent claims 6, 24-26, 28, 31, and 33-34 together for an obviousness rejection based on Morita combined with asserted “well-known” information. Appellant respectfully traverses this rejection.

The Examiner stated that it is “well known in the art” to use authenticating agents in a “food or beverage product for testing the product” or to use “material such as the ethylene/C3-C20 alpha-olefin copolymer, the ethylene/C1-C20 ester of (meth)acrylic acid copolymer, the polyamide, or the ionomer” in a “dosimeter for packaging the authenticating agent.” (Office Action mailed Oct. 11, 01 at p.3, lines 12-13 and p.3, line 19 to p.4, line 2.)

Appellant respectfully traversed those statements and requested that the Examiner supply references to support the asserted “well-known” prior art in accordance with MPEP 2144.03. (Response mailed Feb. 11, 2002 at page 5, lines 13-21.) The Examiner failed to provide the requested support. Accordingly, the obviousness rejection should be withdrawn.

Further, a claimed invention is not obvious in view of a combination that fails to teach or suggest all of the claim recitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (cited by MPEP §2143.03). Each claim recitation must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970) (cited by MPEP §2143.03). In this case, neither Morita nor the asserted

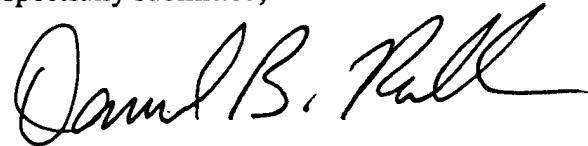
“well-known” information – taken either alone or in combination -- suggests an “authenticating agent incorporated into the package,” as recited by dependent claim 6 or “providing a package” as recited in dependent claims 24-26, 28, 31, and 33-34.

Claims 24-26, 28, 31, and 33-34 are separately patentable because Morita and the asserted “well-known” information fail to suggest anything related to “comparing the spectral response . . . to determine whether the package to be authenticated is authentic” as recited in these claims. Morita is directed to a dosimeter, and teaches nothing regarding authentication of a package. The asserted “well-known” information does not suggest anything regarding product authentication. Accordingly, these claims are patentable over the combination of Morita and the asserted “well-known” information.

IV. Conclusion

For the foregoing reasons, Appellant respectfully requests that the rejections be reversed.

Respectfully submitted,



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Appendix

1. (Amended) A package comprising a product and an effective amount of authenticating agent incorporated into the package, wherein the authenticating agent is a substance that forms detectable free radicals upon irradiation.
2. The package of claim 1, further comprising one or more packaging materials, wherein the authenticating agent is incorporated in the packaging material.
3. The package of claim 2, wherein the packaging material comprises a polymeric packaging film, said authenticating agent being incorporated in said film.
4. The package of claim 1, wherein the authenticating agent comprises at least one of an amino acid, a sugar, and an amine salt of an organic acid.
5. The package of claim 4, wherein the authenticating agent comprises alanine.
6. The package of claim 1, wherein the product comprises at least one of a food product and a beverage product.
7. (Amended) A method of making a package, comprising:
incorporating an authenticating agent into a component of the package as an in situ product marker, wherein the authenticating agent is a substance that forms detectable free radicals when exposed to ionizing radiation, said authenticating agent being present in a manner such that the free radicals provide a characteristic spectral response when subjected to a spectroscopic analysis capable of detecting free radicals in order to allow authentication of the package from said spectral response.
8. The method of claim 7, wherein the component comprises a packaging material, and wherein the authenticating agent is incorporated into the packaging material.
9. The method of claim 8, wherein the packaging material comprises a polymeric packaging film, and wherein the authenticating agent is incorporated into said film.

10. The method of claim 7, wherein the authenticating agent comprises alanine.

13. (Amended) The method of claim 21, wherein the spectroscopically analyzing comprises electron spin resonance spectroscopy.

14. (Amended) The method of claim 21, wherein the given effective amount of radiation comprises at least one of gamma radiation, electron beam radiation, corona discharge, plasma discharge, X-rays and microwave energy.

15. (Amended) The method of claim 21, wherein at least one of the one or more authenticating agents comprises alanine.

17. (Amended) The method of claim 22, wherein the given effective amount of radiation comprises at least one of gamma radiation, electron beam radiation, corona discharge, plasma discharge, X-rays and microwave energy.

18. (Amended) The method of claim 22, wherein the spectroscopically analyzing comprises electron spin resonance spectroscopy.

19. (Amended) The method of claim 22, wherein at least one of the one or more authenticating agents comprises at least one of an amino acid, a sugar, and an amine salt of an organic acid.

20. (Amended) The method of claim 22, wherein at least one of the one or more authenticating agents comprises alanine.

21. A method of authenticating a package comprising:
providing a package incorporating a given amount of one or more authenticating agents that upon exposure to a given effective dosage of radiation is capable of forming detectable free radicals having a characteristic spectral response;
exposing at least a portion of a package to be authenticated to the given effective dosage of radiation;

spectroscopically analyzing the irradiated package portion to obtain a spectral response for the irradiated package portion; and

comparing the spectral response for the irradiated package portion to the characteristic spectral response to determine whether the package to be authenticated is authentic.

22. A method of authenticating a package comprising:

providing a package incorporating a given amount of one or more authenticating agents that upon exposure to a given effective dosage of radiation is capable of forming detectable free radicals having a characteristic spectral response;

exposing a representative reference sample of the package incorporating the authenticating agent to the given effective amount of radiation;

spectroscopically analyzing the irradiated representative sample to obtain a spectral response for the irradiated representative sample;

exposing at least a portion of a package to be authenticated to the given effective dosage of radiation;

spectroscopically analyzing the irradiated package portion to obtain a spectral response for the irradiated package portion; and

comparing the spectral response for the irradiated package portion to the spectral response for the irradiated representative sample to determine whether the package to be authenticated is authentic.

23. The method of claim 22 wherein at least one of the one or more authenticating agents comprises an amino acid.

24. The method of claim 22 wherein at least one of the one or more authenticating agents comprises a sugar.

25. The method of claim 22 wherein at least one of the one or more authenticating agents comprises an amine salt of an organic acid.

26. The method of claim 22 wherein the package comprises a food product, and the one or more authenticating agents are incorporated in the food product.

27. The method of claim 22 wherein the package comprises a polymeric film having at least one layer comprising ethylene homopolymer and at least one of the one or more authenticating agents is incorporated in the at least one layer.

28. The method of claim 22 wherein the package comprises a polymeric film having at least one layer comprising ethylene/C₃-C₂₀ alpha-olefin copolymer and at least one of the one or more authenticating agents is incorporated in the at least one layer.

29. The method of claim 22 wherein the package comprises a polymeric film having at least one layer comprising ethylene/vinyl alcohol copolymer and at least one of the one or more authenticating agents is incorporated in the at least one layer.

30. The method of claim 22 wherein the package comprises a polymeric film having at least one layer comprising ethylene/(meth)acrylic acid copolymer and at least one of the one or more authenticating agents is incorporated in the at least one layer.

31. The method of claim 22 wherein the package comprises a polymeric film having at least one layer comprising ethylene/C₁-C₂₀ ester of (meth)acrylic acid copolymer and at least one of the one or more authenticating agents is incorporated in the at least one layer.

32. The method of claim 22 wherein the package comprises a polymeric film having at least one layer comprising ethylene/vinyl acetate copolymer and at least one of the one or more authenticating agents is incorporated in the at least one layer.

33. The method of claim 22 wherein the package comprises a polymeric film having at least one layer comprising polyamide and at least one of the one or more authenticating agents is incorporated in the at least one layer.

34. The method of claim 22, wherein the package comprises a polymeric film having at least one layer comprising ionomer and at least one of the one or more authenticating agents is incorporated in the at least one layer.

35. The method of claim 22, wherein the package comprises a substance selected from the group consisting of paperboard, chipboard, and cardboard, and at least one of the one or more authenticating agents is incorporated in the substance.

36. The method of claim 22 wherein the package comprises a packaging material and the one or more authenticating agents are present in an amount ranging from about 100 ppm to about 5 weight percent based on the weight of the packaging material.

37. (Amended) The method of claim 22 wherein the package comprises a hot blown film and at least one of the one or more authenticating agents is incorporated in the hot blown film.